

ORIGINAL
FILE

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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In the Matter of)
Request for Amendment of the) RM-
Commission's Rules To Enable)
Use of Line 21, Field 2, for)
Closed Captions and Data Services)

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

PETITION FOR RULEMAKING

The Consumer Electronics Group of the Electronic Industries Association ("EIA/CEG") hereby requests that the Commission amend Sections 73.682 and 73.699 of the Commission's rules, as proposed in Appendix A. The proposed rule changes would remove an unnecessary regulatory impediment to use of line 21, field 2, of the television broadcast signal for closed captioning, as well as for text, program identification, and other services. The result would be improved service for all consumers, including the millions of Americans with hearing disabilities.

I. INTRODUCTION AND INTEREST OF EIA/CEG

EIA/CEG represents the consumer electronics industry, an industry that provides the American public with televisions, radios, videocassette recorders and videocameras, compact disc players, and a wide variety of other products. Our membership includes most of the world's major consumer electronics manufacturers, as well as many

smaller companies that produce, import, distribute, sell, and service electronics products.

EIA/CEG has played a special role with respect to closed captioning. We were active in the congressional debate which led to the passage of the Television Decoder Circuitry Act of 1990 ("Decoder Act"), and we supported that measure in the form in which it was enacted into law. An EIA/CEG Task Force (later reconstituted as the Television Data Systems Subcommittee) developed the specifications which served as the foundation for the Commission's Notice of Proposed Rulemaking in the proceeding to develop regulations to implement the Decoder Act.^{1/} EIA/CEG participated actively throughout that rulemaking and in the reconsideration proceeding which followed.

The foregoing activities all related to use of line 21, field 1. Meanwhile, however, the Television Data Systems Subcommittee has continued its leadership role by developing plans to enhance captioning and related services through use of line 21, field 2. When the Commission adopted its initial regulations for implementation of the Decoder Act, it specifically acknowledged that additional improvements could be made if all of line 21 were authorized

^{1/} Amendment of Part 15 of the Commission's Rules to Implement the Provisions of the Television Decoder Circuitry Act of 1990, 6 FCC Rcd. 449, 449-450, 455 et seq. (¶¶ 6-7 and Appendix) (1991).

for captioning purposes, and it expressly encouraged EIA or another interested party to submit a petition for rulemaking proposing such a change.^{2/} This petition follows through on that invitation and seeks to clear away the modest regulatory obstacles to use of line 21, field 2.

II. DISCUSSION

A. Use of Line 21, Field 2, Should Be Authorized for Captioning and Related Services.

As the Commission recognized in the order adopting the Decoder Act regulations, the availability of televisions with decoding capability may increase the demand for two different channels of captioning to accompany a single program.^{3/} It would surely serve the public interest to allow for a program to be captioned in two different languages, or for two different reading levels.^{4/} It would also serve the public interest to enhance the availability of text services and to enable the delivery of other data services via line 21. But, as a general proposition, use of

^{2/} Amendment of Part 15 of the Commission's Rules to Implement the Provisions of the Television Decoder Circuitry Act of 1990, 6 FCC Rcd. 2420, 2431 (¶ 36) (1992) ("Decoder Act Order") (subsequent history omitted). See also id. at 2434 (¶ 43) (encouraging EIA Task Force to continue developing improvements in caption service).

^{3/} Decoder Act Order, 6 FCC Rcd. at 2431 (¶ 36).

^{4/} See id., 6 FCC Rcd. at 2430-31 (¶¶ 34-35).

line 21, field 1, alone, allows for a "data rate [which] is insufficient to caption effectively two channels simultaneously," much less to accommodate captions, text, and other data services.^{5/} The obvious solution is to allow for use of line 21, field 2.

EIA/CEG's Television Data Systems Subcommittee has been working on this problem for some time. To ensure maximum utility of the process, the Subcommittee's efforts have included representation of a broad and diverse group of organizations. Receiver manufacturers and decoding circuitry manufacturers, program providers and caption providers, and other organizations have all been encouraged to participate actively -- and they have done so.^{6/} What has emerged is a substantial consensus, at least among most active members of the Subcommittee, that line 21, field 2, can and should be authorized for transmission of captioning information and other related services.

As a result, EIA/CEG now asks the Commission to authorize use of line 21, field 2, for delivery of

^{5/} Id., 6 FCC Rcd at 2431 (¶ 35).

^{6/} A list of organizations which currently meet EIA/CEG's criteria for active membership on the Subcommittee is attached as Appendix B. EIA/CEG's inclusion of this list is not intended to signify that any single organization on the list endorses the present petition. These and other organizations can, of course, present their own comments to the Commission once the petition is placed on public notice.

additional channels of captioning and text, as well as an "extended data service" that could include program identification, program schedules, and other information that will be valuable to all consumers, including but not limited to people with hearing disabilities. Of course, caption information would continue to have priority, as the present rules already specify in the case of field 1, and the other data would be carried only on a "space available" basis.^{7/} The same data format would be used for field 2 as has already been established for field 1.

B. Only Relatively Minor Rule Changes Are Needed.

The Subcommittee believes that only modest changes to the Commission's rules are needed to expand the opportunity for transmission of closed captions and related information on line 21, field 2. Specifically, it appears that the necessary flexibility can be achieved by amending Section 73.682(a)(22) of the Commission's rules and by deleting two diagrams which appear in Section 73.699 (Figure 17). There is no need to impose any new requirements on broadcasters or on receiver manufacturers. The proposed changes would merely be permissive.^{8/} They would simply

^{7/} See 47 C.F.R. § 73.682(a)(22)(ii)(1991).

^{8/} In this regard, EIA/CEG's proposal is fully consistent with the spirit of the President's deregulatory initiatives, which the Commission has strongly endorsed. See State of the Union Address by President (Footnote 8 continued on next page)

make it possible for field 2 to be used for captioning and other data services.

Subparagraph 73.682(a)(22)(i) currently allows for the transmission of program-related data signals on line 21, field 1, and the first half of line 21, field 2. This provision can easily be changed to specify that all of line 21, fields 1 and 2, may be used.^{9/} Two obsolete portions of this subparagraph should also be deleted; insofar as EIA/CEG is aware, there is no continuing reason to maintain the provisions of (A), which authorizes a reference pulse for a decoder-associated adaptive multipath equalizer filter, or (C), which authorizes a framing code to be used by the data decoder in the first half of field 2. Indeed, these signals have never been used to support captioning services.^{10/}

(Footnote 8 continued from previous page)

George Bush, 102d Congress, Second Session 4-5 (Jan. 28, 1992); Report of the Federal Communications Commission Regarding the President's Regulatory Reform Program (Apr. 28, 1992). EIA/CEG's proposal also comports with legislative directives "to encourage the provision of new services and technologies and services to the public." 47 U.S.C. § 157(a)(1988).

^{9/} To forestall any potential confusion, it would be advisable to clarify that the signals on field 1 and field 2 are separate and distinct. See first suggested note in Appendix A.

^{10/} See Decoder Act Order, 6 FCC Rcd. at 2431 (¶ 35 n.25) ("When closed captioning was first authorized, the first half of line 21 of field 2 was also used to transmit a barker code In practice, it was found that the barker code was unnecessary.

Accordingly, the first half of line 21, field 2, is (Footnote 10 continued on next page)

EIA/CEG perceives no need for changes in the remainder of Section 73.682. Subparagraph (a)(22)(ii) allows for non-program-related data signals to be transmitted when line 21 is not being used for program-related data signals.^{11/} Subparagraph (a)(22)(iii) allows for transmission of data signals conforming to different formats upon prior approval of the Commission. Subparagraphs (a)(22)(iv) and (v) ensure that data signals must not cause significant degradation of the visual signal and that visual emergency messages must take precedence over captioning and other data services. Thus, the only change in Section 73.682 which appears to be necessary is that in Subparagraph (a)(22)(i).

In Section 73.699, EIA/CEG recommends that Figures 17B and 17C be deleted. These figures are obsolete and deleting them will not have any adverse affects on existing

(Footnote 10 continued from previous page)
currently unused"). The reference pulse for the adaptive multipath equalizer filter was transmitted in the early days of captioning, but no decoders were built that used this pulse. Thus, neither the framing code nor the reference pulse is used today, and reserving even limited spectrum for these obsolete purposes represents a waste of a valuable resource, contrary to Commission policy.

^{11/} This will preserve the existing authority for text services and also clear the way for use of the extended data service developed by the Television Data Systems Subcommittee.

hardware.^{12/} A single data format is appropriate for use in both fields 1 and field 2 of line 21, so Figure 17A (to be redesignated as Figure 17) is all that is needed.

C. EIA/CEG's Proposal Should Be Considered
Expediently.

Under the Decoder Act and the implementing regulations adopted by the Commission, closed caption decoder circuitry is required to be included in all television receivers with screen sizes of 13 inches or larger which are manufactured after June 30, 1993. Receiver manufacturers are diligently working to meet that deadline, and a growing number of televisions already include caption decoding and display capabilities.

Field 2 services, however, cannot be made available to consumers until the Commission amends its rules. The second half of line 21, field 2, is currently unavailable for use by caption and other data services, and the format currently specified for the first half of line 21, field 2, is not used by the decoding circuitry that is

^{12/} As already noted, the adaptive equalizer reference pulse (Figure 17B) and the field two framing code (Figure 17C) are not currently used. Figure 17C also contemplates use of the second half of line 21, field 2, for active video, but EIA/CEG is aware of no television receivers which display video images transmitted in line 21, field 2. The Commission itself has implicitly recognized this by allowing for non-video information to be transmitted in line 22.

being incorporated in television receivers nor by existing stand-alone decoders.

EIA/CEG is aware of no public interest consideration which warrants any delay in opening up the use of line 21, field 2, for captions and other data services using the same data format as line 21, field 1. But there are substantial public interest benefits that can be made available if the rules are amended in the manner proposed here. Accordingly, EIA/CEG urges the Commission to do its utmost to try to expedite the rulemaking process.

A reasonable goal would be for the Commission to adopt regulations before other regulations relating to the Decoder Act go into effect, i.e., by July 1, 1993.^{13/} EIA/CEG pledges its cooperation to move the process along as swiftly as possible.

^{13/} In this regard, it is noteworthy that the Commission developed its regulations to implement the Decoder Act in merely 180 days, and that task was much more complicated than the rule changes proposed here.

III. CONCLUSION

For the reasons stated, EIA/CEG respectfully proposes that the Commission amend its rules in the manner proposed above and in Appendix A, so that caption, text, and other data services can be provided on line 21, field 2, and requests that a Notice of Proposed Rulemaking to this effect be published expeditiously.

Respectfully submitted,

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APPENDIX A

PROPOSED RULE CHANGES

EIA/CEG proposes the following changes to Section 73.682(a)(22)(i). Proposed additions are marked by underscoring. Proposed deletions are marked by overstriking.

All of Line 21, Field 1 and ~~the first half of Line 21,~~ Field 2, may be used for the transmission of a program related data signal which, when decoded, provides a visual depiction of information simultaneously being presented on the aural channel. Such data signal shall conform to the format described in Figure 17A of § 73.699 and may be transmitted during all periods of regular operation.

Note: The signals on Fields 1 and 2 shall be distinct data streams, for example, to supply captions in two different languages, or at two different reading levels, or one caption and one text service, etc.

~~(A) A reference pulse for a decoder associated adaptive multipath equalizer filter may replace the data signal every eighth frame. The reference pulse shall conform to the format described in figure 17b of § 73.699.~~

~~(B)~~ A decoder test signal consisting of data representing a repeated series of alphanumeric characters may be transmitted at times when no program related data is being transmitted.

~~(C) A framing code to be used by the data decoder may be transmitted during the first half of Line 21, Field 2 when data, reference pulse and test signals are present. See Figure 17c of § 73.699 for a description of the format for the framing code.~~

~~(D)~~ (B) The data signal shall be coded using a non-return-to-zero (NRZ) format and shall employ standard ASCII 7 bit plus parity character codes.

Note: For more information on data formats and specific data packets, see EIA-608, "Line 21 Data Services for NTSC," available from the Electronic Industries Association.

EIA/CEG also proposes that Figures 17B and 17C of Section 73.699 be deleted and that Figure 17A be redesignated as Figure 17.

APPENDIX B

ORGANIZATIONS PARTICIPATING IN
TELEVISION DATA SYSTEMS SUBCOMMITTEE */

Cable Television Laboratories
CaptionAmerica
The Caption Center/WGBH
EEG Enterprises, Inc.
Gemstar Development Corporation
InSight Telecast, Inc.
ITT Semiconductor
Matsushita Industrial Company
Mitsubishi Electric Sales
National Association of Broadcasters
National Captioning Institute
Nielsen Media Research
Philips Consumer Electronics Company
Sanyo Manufacturing Company
SoftTouch, Inc.
Sony Corporation of America
The Ledler Foundation
Thomson Consumer Electronics
Toshiba America
Zenith Electronics

*/ Based on attendance at any one of the Subcommittee's three most recent meetings, these organizations meet EIA/CEG's criteria for voting membership in the Subcommittee.